I CLAIM:

1. An image tracking system for use with an image capture device which obtains digitized image frames of an object, the image tracking system comprising:
   (a) a support for holding the image capture device;
   (b) a processing device for determining an object location value for the object based on the digitized image frames generated by the image capture device;
   (c) a position control device coupled to the support for, in use, rotating the support and the image capture device mounted therein about two axes based on the object location such that the object remains within a center region of each of the digitized image frames, said position control device comprising:
      (i) a base;
      (ii) a first motor mounted on the base for generating a first rotational movement based on the object location and a first rotatable member mounted to the base for rotation about a first axis, said first rotatable member being connected to the first motor; and
      (iii) a second motor mounted on the base for generating a second rotational movement based on the object location and a second rotatable member comprising the support mounted to the first rotatable member for rotation about a second axis and being connected to the second motor.

2. The image tracking system of claim 1, wherein the first motor comprises a first shaft member having a first shaft rotation axis longitudinally concentric with the first shaft member, and the second motor comprises a second shaft member having a second shaft rotation axis longitudinally concentric with the second shaft member, such that the first shaft rotation axis and the second shaft rotation axis

are motionless and fixed relative to one another.

3. The image tracking system of claim 2, further comprising a first tendon for coupling the first motor to the first rotatable member and a second tendon for coupling the second motor to the second rotatable member.

4. The image tracking system of claim 3, wherein said second axis rotates about the first rotation axis during the rotation of the first rotatable member and said second tendon is substantially aligned with the first rotation axis so that rotation of the first rotatable member about the first rotation axis occurs without any relative rotation between the first and second rotatable members.

5. The image tracking system of claim 1, wherein the first axis and the second axis are orthogonal to each other.

6. The image tracking system of claim 1, wherein said base is adapted to rest on a support surface and has a cavity region formed therein for housing first and second stationary motors.

7. The image tracking system of claim 1, further comprising a mounting member for securing the first motor and the second motor, wherein the mounting member attaches to the base member.

8. The image tracking system of claim 7, wherein said mounting member further comprises a first vertical shaft member for engaging the first rotatable member.

9. The image tracking system of claim 8, wherein the first rotatable member further comprises a cylindrical hollow cavity for rotatably receiving the first vertical shaft member of the mounting member.

10. The image tracking system of claim 1, wherein the first rotational movement is a pan movement and the second rotational movement is a tilt movement.

11. The image tracking system of claim 1, wherein the first axis is stationary.

12. The image tracking system of claim 1, wherein the first axis is a major rotation axis and the second axis is a minor rotation axis rotatable about the first axis.

13. The image tracking system of claim 1, wherein the object has a selected color and the object location is the centroid of a region of the selected color within the digitized image frame.

14. The image tracking system of claim 1, wherein the image capture device is a video camera.

15. The image tracking system of claim 1, wherein the processing device is a microcontroller.

16. An image tracking system for use with first and second image capture devices which obtains digitized image frames of an object, the image tracking system comprising:
(a) a first support for holding the first image capture device and a second support for holding the second image capture device;
(b) a processing device for determining an object location value for the object based on the digitized image frames generated by the image capture device;
(c) a position control device coupled to the support for, in use, rotating the first and second supports and the first and second

image capture devices mounted therein about four axes based on the object location such that the object remains within a center region of each of the digitized image frames, said position control device comprising:

(i) a base;

(ii) a first motor mounted on the base for generating a first rotational movement based on the object location and a first rotatable member mounted to the base for rotation about a first axis, said first rotatable member being connected to the first motor;

(iii) a second motor mounted on the base for generating a second rotational movement based on the object location and a second rotatable member mounted to the first rotatable member for rotation about a second axis and being connected to the second motor;

(iv) a third rotatable member comprising the first support and a fourth rotatable member comprising the second support, said third and fourth rotatable members being mounted on the second rotatable member, at least one of said third and fourth rotatable members being rotably mounted to said second rotatable member; and

(v) a third motor mounted on the base for providing relative rotation between said third and said fourth rotatable members.

17. The image tracking system of claim 16, wherein said third motor provides rotation to said third rotatable member and further comprising a fourth motor mounted on the base for providing rotation to said fourth rotatable member.

18. The image tracking system of claim 17, wherein said third motor generates a third rotational movement based on the object location

and rotates the third rotatable member and the fourth motor generates a fourth rotational movement based on the object location and rotates the fourth rotatable member.

19. The image tracking system of claim 18, wherein the first motor comprises a first shaft member having a first shaft rotation axis longitudinally concentric with the first shaft member, the second motor comprises a second shaft member having a second shaft rotation axis longitudinally concentric with the second shaft member, the third motor further comprising a third shaft member having a third shaft rotation axis longitudinally concentric within the third shaft member and the fourth motor further comprises a fourth shaft member having a fourth shaft rotation axis longitudinally concentric within the fourth shaft member, such that the second shaft rotation axis, the third shaft rotation axis and the fourth shaft rotation axis are each motionless and fixed relative to one another.

20. The image tracking system of claim 19, wherein the first shaft rotation axis is also motionless and fixed relative to the second shaft rotation axis, the third shaft rotation axis and the fourth shaft rotation axis.

21. The image tracking system of claim 19 or 20, further comprising a first tendon for coupling the first motor to the first rotatable member, a second tendon for coupling the second motor to the second rotatable member, a third tendon for coupling the third motor to the third rotatable member and a fourth tendon for coupling the fourth motor to the fourth rotatable member.

22. The image tracking system of claim 21, wherein when said first shaft member is stationary, at least one point on said first tendon remains fixed relative to said first axis.

23. The image tracking system of claim 21 or 22, wherein when said second shaft member is stationary, at least one point on said second tendon remains fixed relative to said second axis.

24. The image tracking system of claim 21 or 22 or 23, wherein when said third shaft member is stationary, at least one point on said third tendon remains fixed relative to said third axis.

25. The image tracking system of claim 21 or 22 or 23 or 24, wherein when said fourth shaft member is stationary, at least one point on said fourth tendon remains fixed relative to said fourth axis.

26. The image tracking system of claim 16, wherein the first image capture device comprises a first video camera and the second image capture device comprises a second video camera.

27. A method of tracking an object, said method comprising the steps:

(a) obtaining a series of digitized image frames from the image capture device;

(b) identifying the object within each of the digitized frames; and

(c) providing a first rotational movement to the image capture device about a first axis using a first motor and providing a second rotational movement to the image capture device about a second axis using a second motor such that the object remains within a center region of each of the digitized frames.

28. The tracking method of claim 27, wherein step (b) further comprising the steps:

(i) determining object center location values for the object based on the digitized image frames;

(ii) determining frame center location values for the digitized image frames; and

(iii) comparing the object center location values with the frame center location values to determine the amount of rotation necessary to maintain the object within a center region of each of the digitized frames.

29. The tracking method of claim 28, wherein the digitized image frames contain an object image for the object.

30. The tracking method of claim 29, wherein determining the object center location values for the object comprises calculating the centroid of the object image within each digitized image frame.

31. The tracking method of claim 30, wherein the object image is a region of a selected color.

32. The tracking method of claim 31, wherein the step of determining the object center location values for the object comprises locating a pixel located at the center of a group of pixels within said region of a selected color.

33. The tracking method of claim 31, wherein the step of determining frame center location values comprises calculating the centroid of the digitized image frame.

34. The tracking method of claim 31, wherein step (c) requires rotating the image capture device such that the object center location value and the frame center location value are substantially the same.

35. The tracking method of claim 27, wherein the image capture device is a video camera.

36. The tracking method of claim 27, wherein the image capture device is

a first video camera and a second video camera.

37. The tracking method of claim 27, wherein the first stationary motor provides the image capture device with pan movement and the second stationary motor provides the image capture device with tilt movement.

38. The tracking method of claim 37, wherein the pan movement consists of rotation about a major rotation axis and the tilt movement consists of rotation about a minor rotation axis.

39. The tracking method of claim 27, wherein step (c) further comprises using first and second motors mounted on a common base to provide first and second rotational movements to the image capture device.

40. The tracking method of claim 35, wherein the minor rotation axis rotates about the major rotation axis.

41. The tracking method of claim 36, wherein the major rotation axis is stationary relative to said first shaft rotation axis.

42. The tracking method of claim 27, wherein step (c) further comprises providing a third rotational movement to the image capture device about a third axis using a third motor and providing a third rotational movement to the image capture device about a fourth axis using a fourth motor such that the object remains within a center region of each of the digitized frames.

43. The tracking method of claim 42, wherein the first rotational movement is a major pan movement, the second rotational movement is a tilt movement, the third rotational movement is a first

minor pan movement and the fourth rotational movement is a second minor pan movement.

44. The image tracking system of claim 42, wherein when said first shaft member is stationary, said first rotatable member remains fixed relative to said first axis

45. The image tracking system of claim 42 or 44, wherein when said second shaft member is stationary, said second rotatable member remains fixed relative to said second axis.

46. The image tracking system of claim 42, 44 or 45, wherein when said third shaft member is stationary, said third rotatable member remains fixed relative to said third axis.

47. The image tracking system of claim 42, 44, 45, or 46, wherein when said fourth shaft member is stationary, said fourth rotatable member remains fixed relative to said fourth axis.

48. A tension regulation device for controlling the amount of tension applied to a tendon, said tension regulation device comprising:

(a) a platform;

(b) a resilient column rotatably mounted on the platform and having a cross-section with a first radius;

(c) a splined column rotatably mounted on the platform and having a plurality of spline members extending radially and having a cross-section with a second outer radius, said splined column being adapted to receive a portion of the tendon therearound;

(d) said resilient column being spaced apart from said splined column and rotatably mounted on said platform at a distance equal to slightly less than the sum of the first and second radius; and

(e) such that in the absence of tension the spline members slightly deform said resilient column to restrict rotational movement of said spline column and said tendon and in the presence of tension, the spline members are forced to travel along the surface of said resilient column and to unwind the portion of the tendon around the splined column.

49. The tension regulation device of claim 48, wherein said platform is mounted within a neck tendon support structure, said neck structure having two orifices, each orifice adapted to receive a portion of the tendon.

50. The tension regulation device of claim 48, wherein said platform is mounted on a vertical shaft, said vertical shaft having a surface being adapted to receive a portion of the tendon.

51. The tension regulation device of claim 48, wherein the axis of rotation of said resilient column is orthogonal to said platform.

52. The tension regulation device of claim 48, wherein the axis of rotation of said splined column is orthogonal to said platform.

53. A tendon motor pulley for coupling a tendon length to a motor shaft, said tendon motor pulley comprising:

(a) a first disc;

(b) an second disc, the first and second discs having facing surfaces;

(c) a hub positioned concentrically between said first and second discs; and

(d) at least one engagement means extending between the first and second discs and located radially outwardly from the hub, whereby a tendon can travel freely around the hub and the

engagement means engages the tendon.

54. The tendon motor pulley of claim 53, wherein said engagement means is a plurality of protrusions and a plurality of recesses, said recesses adapted to receive said protrusions in a snap fit arrangement.

55. The tendon motor pulley of claim 53, wherein said hub is disc-shaped.